

Ten Year Plan Profit and Loss Details for Biogas-to-Electricity, Phase 3 in Fiji & Phase 4 in Open Ocean by

Phase 3. Build biogas-to-electricity and fish producing forests sufficient to provide Fiji with 60 MW of renewable electricity so it is carbon-neutral. Can be repeated globally in any country with sheltered water.		Replacing Fiji's 2011 fossil-fueled generation would require about 60 MW of capacity. As we continue building the sheltered biogas-to-electricity OMA's we will first move to locations with equally high electricity costs near sheltered water. Process refinements should allow us to continue expanding into areas with lower electricity generation costs.										
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Row totals
Research equipment, sampling, analysis, data analysis, pictorial and text records, regulatory reports, progress reports, peer review publications, etc. Some Fiji, some U.S. Needed for expansion in and beyond Fiji	(\$)			75,000	365,000	36,500	36,500	36,500	36,500	36,500	36,500	\$586,000
Patent & IP processing & legal (Needed for expansion beyond Fiji)	(\$)			\$60,000	\$60,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$168,000
Payments upon completion to the Dsgn-Bld-Op contracts are equal to the installed OMA cost.	\$540,000	\$/MW of capacity	90%	capacity factor								
Payments for operation are equal to the fuel conditioning and generation cost, plus the salary cost.	\$69	\$/MWh										Row totals
Installed capacity each year	MW				10	20	20	10	0	0	0	60
Dsgn-Bld-Op Contracts (We provide all we know to several design-build teams. The teams are paid partly on completion of construction and partly by sale of the generated power to us. We mark-up and sell the power to the utility.)	(\$)				\$5,000,000	\$16,000,000	\$26,000,000	\$30,000,000	\$30,000,000	\$30,000,000	\$30,000,000	\$167,000,000
Research, monitoring, data recording, revising the how-to book	(\$)				\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$700,000
Patent processing	(\$)							\$60,000	\$60,000	\$60,000	\$60,000	\$240,000
Phase 3 expense totals (rounded nearest \$100,000)	(\$)				\$5,100,000	\$16,100,000	\$26,100,000	\$30,200,000	\$30,200,000	\$30,200,000	\$30,200,000	\$168,100,000
Phase 3 income, energy	(\$)					\$8,400,000	\$25,100,000	\$41,800,000	\$50,100,000	\$50,100,000	\$50,100,000	\$225,600,000
Phase 3 income, CDM	(\$)					\$400,000	\$1,100,000	\$1,800,000	\$2,200,000	\$2,200,000	\$2,200,000	\$9,900,000
Phase 3 income, fish, fertilizer, and other products (estimated)	(\$)					\$1,500,000	\$4,600,000	\$7,700,000	\$9,250,000	\$9,250,000	\$9,250,000	\$41,550,000
Total Phase 3 income (rounded nearest \$100,000)	(\$)				\$0	\$10,300,000	\$30,800,000	\$51,300,000	\$61,600,000	\$61,600,000	\$61,600,000	\$277,200,000
Operating Profit (combining Phases 1, 2 & 3, rounded nearest \$100,000)	-\$650,000	-\$740,000	-\$1,500,000	-\$4,280,000	-\$2,800,000	\$7,700,000	\$24,100,000	\$34,400,000	\$34,600,000	\$34,600,000	\$34,600,000	\$125,400,000

Phase 4 - Open ocean. We repeat Phase 3, but for open ocean forests. It will be more difficult to grow and harvest the algae and the energy will have to be transported globally. However the forest size is essentially unlimited and potential profits immense. Very large scale operations should recover the cost of converting the methane to liquefied natural gas or to transportation fuels. We will have refined our sheltered OMA process and our design-build-operate process for building OMA's. We project about 5 years of development beyond Phase 2 for before the first 500 GW is operational in the open ocean in year 10.													Row totals			
More detailed system designs based on sheltered water knowledge, lab trials, and limited ocean trials. This includes consulting with manufacturers, ocean & digestion engineers, collaborating with others, writing "how to" manual, and patent processing.	(\$millions)		\$1	\$2	\$3	\$4	\$2	\$2	\$1			\$15				
Deploying system designs in the ocean, trial operations.	(\$millions)			\$5	\$10	\$20	\$20	\$30				\$85				
Payments upon completion to the Dsgn-Bld-Op contracts are equal to the installed OMA cost.	\$540	\$million/GW of capacity	90%	demand factor												
Payments for operation are equal to the fuel conditioning and generation cost, plus the salary cost.	0.07	\$million /GWh	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Years 11-15	Years 16-20	Years 21-25	Years 26-30	Years 31-35	Row totals
Installed capacity each year	(GW)			0	0	0	0	0	0	500	1,000	2,000	2,000	500	0	120,000
Dsgn-Bld-Op Contracts (We provide all we know to several design-build teams. The teams are paid partly on completion of construction and partly by sale of the generated power to us. We mark-up and sell the power to the utility.)	(\$millions)								\$0	\$300,000	\$3,900,000	\$9,100,000	\$14,100,000	\$15,100,000	\$15,000,000	\$58,000,000
Phase expense totals	(\$millions)		\$1	\$2	\$8	\$14	\$22	\$22	\$31	\$300,000	\$3,900,000	\$9,100,000	\$14,100,000	\$15,100,000	\$15,000,000	\$58,000,000
Phase 4 income, energy	(\$millions)									\$0	\$2,100,000	\$6,300,000	\$14,600,000	\$23,000,000	\$25,100,000	\$71,000,000
Phase 4 income, CDM, fish, other	(\$millions)								\$0	\$0	\$2,600,000	\$7,900,000	\$18,300,000	\$28,800,000	\$31,400,000	\$89,000,000
Total Phase 4 income	(\$millions)								\$0	\$0	\$4,700,000	\$14,200,000	\$32,900,000	\$51,800,000	\$56,500,000	\$160,000,000
Operating Profit (Phase 4 only, rounded after year 9 to nearest \$100 billion)	(\$millions)		-\$1	-\$2	-\$8	-\$14	-\$22	-\$22	-\$31	-\$300,000	\$800,000	\$5,100,000	\$18,800,000	\$36,700,000	\$41,500,000	\$100,000,000